

JPL Homepage: Ocean-Atmosphere Interaction

Gunnar Spreen

Education

- Diplom degree in physics (comparable M.Sc.), University of Hamburg, Department of Physics, Hamburg, Germany (2004)
- Ph.D. in Physical Oceanography, University of Hamburg, Department of Earth Sciences, Hamburg, Germany (2008)

Research Interests

- Satellite remote sensing with a specialty in sea ice using various satellite sensors (e.g. GLAS/ICESat, AMSR-E, SSM/I, SAR, QuikSCAT, MODIS) and techniques.
- Gain a better understanding of climate processes, with an emphasis on sea ice - ocean interactions.
- Data synthesis of sea ice remote sensing and model data.

Projects

- ECCO2 (same description and image as everybody else)

Professional Experience

- Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California (2009 - present)
 - Visiting Independent Advisor, Post-doctoral researcher
- Institute of Oceanography, University of Hamburg, Hamburg, Germany (2004 – 2009)
 - Research assistant
- Institute of Environmental Physics, University of Bremen, Bremen, Germany (2003 – 2004)
 - Research assistant

Selected Publications

1. **Spreen, G.**, L. Kaleschke, and G. Heygster: Sea ice remote sensing using AMSR-E 89-GHz channels, *J. Geophys. Res.*, 113, C02S03, doi:10.1029/2005JC003384, 2008.
2. Brümmer, B., D. Schröder, G. Müller, **G. Spreen**, A. Jahnke-Bornemann, and J. Launiainen: Impact of a Fram Strait cyclone on ice edge, drift, divergence and concentration: Possibilities and limits of an observational analysis, *J. Geophys. Res.*, 113, C12003, doi: 10.1029/2007JC004149, 2008.
3. Haarpaintner, J., and **G. Spreen**: Use of Enhanced-Resolution QuikSCAT/SeaWinds Data for Operational Ice Services and Climate Research: Sea Ice Edge, Type, Concentration, and Drift, *IEEE Trans. Geosci. Rem. Sens.*, 45(10), 3131-3137, doi:10.1109/TGRS.2007.895419, 2007.
4. Kern, S., **G. Spreen**, L. Kaleschke, S. De La Rosa Höhn, and G. Heygster (2007), Polynya Signature Simulation Method polynya area in comparison to AMSR-E 89 GHz sea-ice concentrations in the Ross Sea and off the Adélie Coast, Antarctica, for 2002-05: first results, *Ann. Glaciol.*, 46, 409-418, 2007.
5. **Spreen, G.**, S. Kern, D. Stammer, R. Forsberg, and J. Haarpaintner: Satellite-based Estimates of Sea Ice Volume Flux through Fram Strait, *Ann. Glaciol.*, 44, 321-328, 2006.

6. **Spreen, G.**, S. Kern, and D. Stammer: Utilization of Multiple Satellite Sensors to Estimate Sea Ice Volume Flux through Fram Strait, in *Arctic sea ice thickness: past, present & future*, P. Wadhams & G. Amanatidis (ed.), Climate Change and Natural Hazards series 10, European Commission, Brussels, EUR 22416, 176-192, 2006.

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